

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. - 4. (Cancelled)

5. (Previously Presented) A composite antenna device comprising:

a ground board;

an unbalanced antenna including

a first feeding point electrically coupled with the ground board,

a first radiator having a first end and a second end, the first end of the first radiator being connected with the first feeding point, and

a load conductor having a first end, a second end, and a connection point where the load conductor is connected with the second end of the first radiator, the load conductor intersects a straight line which also passes through the first feeding point and which is perpendicular to the ground board;

a balanced antenna including

a second feeding point electrically isolated from the first feeding point,

a second radiator connected with the second feeding point, and

a third radiator connected with the second feeding point,

wherein the load conductor of the unbalanced antenna includes a first portion and a second portion, the first portion of the load conductor being provided between the first end of the load conductor and the connection point, the second portion being provided between the second end of the load conductor and the connection point, and

wherein an impedance Z₁₁ of the first portion of the load conductor, a mutual impedance Z₁₂ of the second radiator to the first portion of the load conductor, a mutual impedance Z₂₁ of the first portion of the load conductor to the second radiator, an impedance Z₂₂ of the second radiator, an impedance Z₃₃ of the second portion of the load conductor, a mutual impedance Z₃₄ of the third radiator to the second portion of the load conductor, a mutual impedance Z₄₃ of the second portion of the load conductor to the third radiator, and an impedance Z₄₄ of the third radiator satisfy the relation of

$$\begin{pmatrix} Z_{11} & Z_{12} \\ Z_{21} & Z_{22} \end{pmatrix} = \begin{pmatrix} Z_{33} & Z_{34} \\ Z_{43} & Z_{44} \end{pmatrix}.$$

6. (Original) The composite antenna device of claim 5, wherein a mutual impedance Z₁₄ of the third radiator to the first portion of the load conductor, a mutual impedance Z₄₁ of the first portion of the load conductor to the third radiator, a mutual impedance Z₂₃ of the second portion of the load conductor to the second radiator, and a mutual impedance Z₃₂ of the second radiator to the second portion of the load conductor satisfy the relation of

$$\begin{pmatrix} Z_{11} & Z_{14} \\ Z_{43} & Z_{44} \end{pmatrix} = \begin{pmatrix} Z_{22} & Z_{23} \\ Z_{32} & Z_{33} \end{pmatrix}.$$

7. - 9. (Cancelled)

10. (Previously Presented) A composite antenna device according to claim 5, wherein the unbalanced antenna is between the balanced antenna and the ground board.